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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,907	11/25/2003	Tetsushi Tanada	9281-4715	2923

7590 05/02/2006

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EXAMINER

NGUYEN, THANH NHAN P

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/722,907	Applicant(s) TANADA ET AL.	
	Examiner (Nancy) Thanh-Nhan P. Nguyen	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-19 is/are pending in the application.
- 4a) Of the above claim(s) 6-12, 15, 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5, 13, 14, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is responsive to Election/Restriction dated 1/17/2006.

Applicants elect, with traverse, Species II: Claims 1, 4-5, 13-14, and 16-17, as the characterization of the species is incorrect as the reflector shown in fig. 6, which has structure that may contain the recesses shown in fig. 4A and B and/or fig. 7. With this reason, the applicants' argument is persuasive. However, in previous Restriction/Election, the figures that were corresponding in Species II should have been figs. 7-8, not figs. 6-7. Species I & II are still patentably distinct, and therefore the election of Species II is considered to be final.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Yoshii et al (JP 2002-022913).

Regarding claim 16, Yoshii et al discloses a reflector (51) comprising an embossed layer (53) having a reflective surface having a plurality of recesses (54); and an embossed base (52) disposed on a surface of the embossed layer opposing the reflective surface, wherein the recesses are formed with random depths in a range of 0.1 .mu.m. to 3 .mu.m. , random pitches of adjacent recesses in a range of 5 .mu.m. to

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100 .mu.m. , and inclination angles of inner surfaces are set in a range of -18 degrees to +18 degrees, [see figs. 8 & 9; pars. 0028 & 0029].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 17 is rejected under 35 U.S.C. 103(a) as being obvious over Yoshii et al in view Kano et al (US 2004/0012726).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing

that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Regarding claim 17, Yoshii et al lacks disclosure of wherein the recesses have a substantially constant reflectance in an acceptance angle range of + - 10 degrees around a regular reflection direction as a center to provide a symmetrical distribution of reflection characteristics around the regular reflection direction.

Kano et al discloses the recesses have a substantially constant reflectance in an acceptance angle range of + - 10 degrees around a regular reflection direction as a center to provide a symmetrical distribution of reflection characteristics around the regular reflection direction, [see fig. 6], for the benefit of obtaining uniform bright display, [see par. 0051]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have discloses the recesses have a substantially constant reflectance in an acceptance angle range of + - 10 degrees around a regular reflection direction as a center to provide a symmetrical distribution of reflection characteristics around the regular reflection direction for the benefit of obtaining uniform bright display.

Claims 1, 5, 13 & 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshii et al in view of Onishi et al (US 6,434,815).

Regarding claim 1, Yoshii et al discloses a reflector (1) comprising: an embossed layer (3) having a reflective surface having a plurality of recesses (4); and an embossed base (2) disposed on a surface of the embossed layer opposing the reflective surface, wherein the embossed layer is a heat-embossed layer and has a

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highly reflective film (5) laminated thereon, the highly reflective film having the reflective surface, and the embossed base comprises a moisture-proof base material, [see fig. 1].

Yoshii et al lacks disclosure of wherein the embossed base comprises polyphenylene sulfide or polyvinylidene fluoride.

However, polyphenylene sulfide or polyvinylidene fluoride were well known and used as moisture-proof materials because of having low moisture absorption characteristic, as evidenced by Onishi et al, [see col. 6, lines 22-25]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the embossed base comprising polyphenylene sulfide or polyvinylidene fluoride for the benefit of being used as moisture-proof element according to its characteristic, and thus, protecting other elements of the device from the moisture in the environment.

Regarding claims 5, 13 & 14, Yoshii et al discloses an adhesive layer (19) laminated on the highly reflective film, and a protecting material provided on the adhesive layer (18 or 14), wherein the protecting material is disposed between the adhesive layer and a liquid crystal layer (15), and wherein the protecting material comprises a substrate (14) of a liquid crystal panel, [see fig. 7].

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshii et al in view of Onishi et al as discussed above, and further in view of Shiao et al (US 2005/0270473).

Regarding claim 4, Yoshii et al lacks disclosure of wherein the heat-embossed layer comprises a lamination of a processed resin layer disposed on the reflective

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surface side having the recesses, and a support resin layer disposed on the moisture-proof base material side and exhibiting a higher glass transition temperature than that of the processed resin layer.

However, it was well known in the art that the higher the glass transition temperature of the material, the better the heat resistance, as evidenced by Shiao et al, [see par. 0023]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the support resin layer, which has a higher glass transition temperature than that of the processed resin layer, disposed on the moisture-proof embossed base for the benefit of protecting other elements which are opposing the embossed base such as the processed resin layer and reflective layer.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen
Examiner
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-- April 30, 2006 --

TN


ANDREW SCHECHTER
PRIMARY EXAMINER